

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A control apparatus for a fuel cell including an oxidizing gas supplying means for supplying unit configured to supply an oxidizing gas to a cathode via an oxidizing gas supply line of the fuel cell, and a hydrogen supplying means for supplying unit configured to supply hydrogen to an anode via a hydrogen supply line of the fuel cell, the anode having a buildup of impurities over time causing a presence of residual gas, the control apparatus comprising:

a cathode-side gas pressure detecting means for detecting unit configured to detect a gas pressure within at least one of the oxidizing gas supply line- and the cathode;

a target hydrogen partial pressure determining means for determining unit configured to dynamically calculate a target hydrogen partial pressure regarding a hydrogen pressure among a gas pressure-mixture in within at least one of the hydrogen supply line and the anode;

a hydrogen supply pressure calculating means for calculating unit configured to calculate a hydrogen supply pressure of hydrogen to be supplied to the fuel cell, based upon the target hydrogen partial pressure and the gas pressure detected by the cathode-side gas pressure detecting means; and

a hydrogen supply control means for controlling unit configured to supply hydrogen so as to be supplied from the hydrogen supplying means to the fuel cell at the hydrogen supply pressure.

2. (Currently Amended) The control apparatus for a fuel cell according to claim 1, wherein

the target hydrogen partial pressure increases as an electricity generation amount required of the fuel cell increases.

3. (Currently Amended) The control apparatus for a fuel cell according to claim 1, further comprising:

a fuel cell temperature detecting means~~for detecting~~unit configured to detect a temperature of the fuel cell; and

~~correcting means~~a correcting unit configured to correct~~for correcting~~ a target hydrogen partial pressure based upon the temperature of the fuel cell, wherein

the hydrogen supply pressure calculating ~~means~~unit calculates~~calculate~~ the hydrogen supply pressure of hydrogen to be supplied to the fuel cell based upon the corrected target hydrogen partial pressure and the gas pressure detected by the cathode-side gas pressure detecting ~~means~~unit.

4. (Previously Presented) The control apparatus for a fuel cell according to claim 3, wherein

the target hydrogen partial pressure decreases as the temperature of the fuel cell increases.

5. (Currently Amended) The control apparatus for a fuel cell according to claim 1, further comprising:

an exhaust means~~for~~unit configured to discharge~~discharging~~ residual gas remaining within at least one of the anode and the hydrogen supply line;

an exhaust control means~~for discharging~~unit configured to discharge the residual gas using the exhaust ~~means~~unit when the hydrogen supply pressure is not within a tolerance range for gas pressure on the anode side; and

a residual gas partial pressure calculating means for calculating unit configured to calculate a partial pressure of residual gas remaining within at least one of the anode and the hydrogen supply line when residual gas is discharged, wherein

the hydrogen supply pressure calculating ~~means~~ calculate unit calculates the hydrogen supply pressure of hydrogen to be supplied to the fuel cell based upon the target hydrogen partial pressure and the residual gas partial pressure.

6. (Currently Amended) A control method for a fuel cell comprising an oxidizing gas supplying means for supplying unit configured to supply an oxidizing gas to a cathode via an oxidizing gas supply line of the fuel cell, and a hydrogen supplying means for supplying unit configured to supply hydrogen to an anode via a hydrogen supply line of the fuel cell, the anode having a buildup of impurities over time causing a presence of residual gas, characterized by the method comprising the following steps of:

detecting a gas pressure within at least one of the oxidizing gas supply line and the cathode;

dynamically calculating ~~determining~~ a target hydrogen partial pressure regarding a hydrogen pressure among a gas ~~pressure mixture in~~ within at least one of the hydrogen supply line and the anode;

calculating a hydrogen supply pressure of hydrogen to be supplied to the fuel cell, based upon the target hydrogen partial pressure and the detected gas pressure; and

controlling hydrogen so as to be supplied from the hydrogen supplying means to the fuel cell at the hydrogen supply pressure.

7. (Previously Presented) The control method for a fuel cell according to claim 6, characterized in that

the target hydrogen partial pressure increases as an electricity generation amount required of the fuel cell increases.

8. (Previously Presented) The control method for a fuel cell according to claim 6, characterized by further comprising the following steps of:

detecting a temperature of the fuel cell;

correcting the target hydrogen partial pressure based upon the temperature of the fuel cell; and

calculating the hydrogen supply pressure of hydrogen to be supplied to the fuel cell based upon the corrected target hydrogen partial pressure and the detected gas pressure.

9. (Previously Presented) The control method for a fuel cell according to claim 8, characterized in that

the target hydrogen partial pressure decreases as the temperature of the fuel cell increases.

10. (Previously Presented) The control method for a fuel cell according to claim 6, characterized by further comprising the following steps of:

discharging residual gas when the hydrogen supply pressure is not within a tolerance range for gas pressure on the anode side;

calculating a partial pressure of residual gas remaining within at least one of the anode and the hydrogen supply line when residual gas is discharged; and

calculating the hydrogen supply pressure of hydrogen to be supplied to the fuel cell based upon the target hydrogen partial pressure and the residual gas partial pressure.

11. (Currently Amended) A control apparatus for a fuel cell ~~comprising~~ including an oxidizing gas supply device ~~for supplying~~ configured to supply an oxidizing gas to a cathode via an oxidizing gas supply line of the fuel cell, and a hydrogen supplying device ~~for supplying~~ configured to supply hydrogen to an anode via a hydrogen supply line of the fuel

cell, the anode having a buildup of impurities over time causing a presence of residual gas,  
the control apparatus comprising:

a controller ~~that~~ that:

\_\_\_\_\_ detects gas pressure within at least one of the oxidizing gas supply line and the cathode,

dynamically calculates~~determines~~ a target hydrogen partial pressure regarding a hydrogen pressure among a gas ~~pressure~~ mixture within ~~at least one of the hydrogen supply line and the anode,~~

calculates a hydrogen supply pressure of hydrogen to be supplied to the fuel cell, based upon the target hydrogen partial pressure and the detected gas pressure, and

controls hydrogen so as to be supplied from the hydrogen supplying device to the fuel cell at the hydrogen supply pressure.

12. (Previously Presented) The control apparatus for a fuel cell according to claim 11, wherein

the target hydrogen partial pressure increases as an electricity generation amount required of the fuel cell increases.

13. (Previously Presented) The control apparatus for a fuel cell according to claim 11, wherein:

the controller further detects a temperature of the fuel cell,  
corrects a target hydrogen partial pressure based upon the temperature of the fuel cell,  
and

calculates the hydrogen supply pressure of hydrogen to be supplied to the fuel cell based upon the corrected target hydrogen partial pressure and the detected gas pressure.

14. (Previously Presented) The control apparatus for a fuel cell according to claim 13, wherein

the target hydrogen partial pressure decreases as the temperature of the fuel cell increases.

15. (Previously Presented) The control apparatus for a fuel cell according to claim 11, wherein

the controller further discharges residual gas remaining within at least one of the anode and the hydrogen supply line,

discharges the residual gas when the hydrogen supply pressure is not within a tolerance range for gas pressure on the anode side,

calculates a partial pressure of residual gas remaining within at least one of the anode and the hydrogen supply line when residual gas is discharged, and

calculates the hydrogen supply pressure of hydrogen to be supplied to the fuel cell based upon the target hydrogen partial pressure and the residual gas partial pressure.